

# Comparisons of Job Characteristics

**Focus Occupation:** [Architectural and Engineering Managers \(11-9041\)](#)

**Associated Occupation:** [Agricultural Engineers \(17-2021\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 84

**Focus Occupation:** Architectural and Engineering Managers (11-9041)

**Associated Occupation:** Agricultural Engineers (17-2021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	23.4	23.2	0	Current knowledge level may be sufficient
Design	5.2	21.5	19.0	<	Expanded education and/or training may be required
Mathematics	9.2	20.1	17.4	<	Expanded education and/or training may be required
Physics	4.3	18.4	13.0	<<	Extensive education and/or training may be required
Mechanical	6.8	16.0	10.4	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	14.8	16.9	>	Current knowledge level is likely sufficient
Building and Construction	4.0	13.8	10.7	<<	Extensive education and/or training may be required
Production and Processing	6.0	12.2	10.7	<	Expanded education and/or training may be required
Chemistry	4.8	12.1	6.6	<<	Extensive education and/or training may be required
Food Production	2.1	11.4	1.0	<<	Extensive education and/or training may be required
Biology	3.7	11.0	1.9	<<	Extensive education and/or training may be required
Law and Government	5.9	10.2	8.6	<	Expanded education and/or training may be required
Geography	3.9	9.2	5.7	<<	Extensive education and/or training may be required
Economics and Accounting	4.4	8.3	8.1	0	Current knowledge level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Agricultural Engineers (17-2021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Critical Thinking	10.8	15.0	12.8	<	A higher skill level may be required
Complex Problem Solving	9.1	14.2	13.0	0	Current skill level may be sufficient
Writing	9.2	14.2	13.5	0	Current skill level may be sufficient
Judgment and Decision Making	9.4	13.2	12.5	0	Current skill level may be sufficient
Mathematics	6.2	12.0	11.7	0	Current skill level may be sufficient
Systems Analysis	6.5	11.5	10.7	0	Current skill level may be sufficient
Systems Evaluation	6.4	11.5	10.7	0	Current skill level may be sufficient
Science	4.5	9.7	8.7	<	A higher skill level may be required
Technology Design	2.6	7.9	3.3	<<	Extensive development of skills in this area may be required
Management of Material Resources	3.7	6.3	9.2	>>	Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 98

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Agricultural Engineers (17-2021)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.2	15.2	0	Current ability level may be sufficient
Written Expression	9.8	14.5	13.8	0	Current ability level may be sufficient
Inductive Reasoning	10.2	14.0	12.5	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	13.9	13.9	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	13.9	0	Current ability level may be sufficient
Category Flexibility	9.0	12.2	11.4	0	Current ability level may be sufficient
Information Ordering	9.9	11.9	12.0	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	11.5	13.3	>	Current ability level is likely sufficient
Number Facility	6.3	11.0	11.2	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 81

**Focus Occupation: Architectural and Engineering Managers (11-9041)**  
**Associated Occupation: Agricultural Engineers (17-2021)**

Work Activities	Exclusivity of Activity
Advise clients or customers	19
Advise clients regarding engineering problems	67
Analyze project proposal to determine feasibility, cost, or time	69
Communicate technical information	4
Confer with engineering, technical or manufacturing personnel	25
Coordinate engineering project activities	71
Delegate authority for engineering activities	73
Develop policies, procedures, methods, or standards	21
Direct and coordinate activities of workers or staff	3
Direct personnel in support of engineering activities	74
Estimate cost for engineering projects	69
Estimate time needed for project	64
Evaluate costs of engineering projects	70
Evaluate engineering data	60
Lead teams in engineering projects	73
Plan testing of engineering methods	72
Prepare reports	8
Prepare technical reports or related documentation	22
Read blueprints	10
Read schematics	34
Read technical drawings	7
Resolve engineering or science problems	46
Understand engineering data or reports	48
Use intuitive judgment for engineering analyses	72
Use pollution control techniques	62
Use project management techniques	47
Use scientific research methodology	21
Use technical regulations for engineering problems	61
Write business project or bid proposals	48

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

**Similarity of Focus Occupation to Associated Occupation: 88**

**Focus Occupation: Architectural and Engineering Managers (11-9041)**  
**Associated Occupation: Agricultural Engineers (17-2021)**

Tools and Technologies	Exclusivity
Computers	1
Content authoring and editing software	1
Industry specific software	1

Information exchange software	1
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.